

## **ITEM #0202216A – EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL**

### **Description:**

Work under this item shall consist of excavating existing channel bottom material in areas where the channel bottom is to be re-graded or disturbed to create a work area for a culvert or bridge or articulated concrete block placement and cofferdam installation. This item shall also include stockpiling and protecting the excavated material on the project site, subsequent placement of the stockpiled material in the channel, removal and proper disposal off-site of all unused material.

### **Materials:**

The material for this item shall consist of the existing naturally formed cobbles, gravel, soils and clean natural sediment from within the channel.

Rock excavated from ledge (bedrock) formations, or broken from larger boulders, will not be accepted. Broken concrete will not be accepted.

If an insufficient quantity of material is available from the existing channel bottom at this site, the Contractor shall furnish supplemental material meeting the approval of the Office of Environmental Planning (OEP) from other sources within the project limits, or from another approved source. Material the Contractor proposes to bring to the site from another source must be inspected and approved by the OEP at the source prior to the excavation or hauling of the material. A minimum notice of 2 weeks must be given to the OEP for inspection and approval.

Bank run gravel, if approved for use as supplemental material, shall be uncrushed, conforming to the requirements of M.02.02-1 of the State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction Form 816.

### **Construction Methods:**

The Contractor shall prepare an area, approved by the Engineer, suitable in size and location for storing the excavated channel bottom material, so that it will not be contaminated, mixed with other excavated material or erode. Select a location where disruption to the channel and wetland areas caused by moving the excavated material to and from the stockpile is minimized. Locate the stockpile where it can remain undisturbed for the duration of the culvert construction. Identify the temporary stockpile area(s) prior to the start of excavation for approval by the Engineer.

Prepare a clean surface for the stockpile adequate to prevent mixing with the underlying soil or other material. Provide adequate measures to contain the stockpiled material and protect it from erosion by rain or other forces. Store material excavated from the existing channel bottom separately from other excavated materials until it may be reused or disposed of, as directed by

the Engineer. Do not add any other excavated or imported material to the stockpile of channel bottom material.

After clearing and grubbing, the Engineer will identify the limits of exposed channel bottom material to be excavated under this item. Only areas within the limits of channel to be re-graded or disturbed to create a work area for the culvert or bridge or articulate concrete block placement and cofferdam placement will be identified for excavation. As much material as possible, will be identified for this excavation. The Engineer will identify the bottom limit of the excavation based on the qualities of the material encountered. Do not in any case excavate below the depth otherwise required for culvert or bridge and cofferdams, including any unsuitable material excavation. Perform the excavation separately, prior to beginning any other roadway, structure, channel, or unsuitable material excavation in the area.

The Contractor shall perform all containment, diversion, or other separation of the channel flow from the excavation of channel bottom material in accordance with the requirements of "Handling Water".

Complete all stages of the culvert or bridge or articulated concrete block construction and cofferdam installation, to the satisfaction of the Engineer, before placing any existing channel bottom material. Notify the OEP at least 10 days prior to initiating the placement of channel bottom material in the channel. Any and all coordination with the Department of Energy and Environmental Protection (DEEP) or District Environmental Coordinator will be done through the OEP.

Place the channel bottom material to the thickness and in the locations shown on the plans, and as directed by the Engineer or OEP. Use equipment and placement techniques that will prevent integration with the surrounding material and keep the channel bottom material relatively homogeneous. Place the channel material in a manner that replicates the original condition of the channel, with a well-defined low flow channel connecting to the existing channel.

Place or dispose of any surplus or unsuitable material in accordance with Section 2.02. Restore the stockpile area as directed by the Engineer.

All material not identified for excavation in accordance with this specification shall be excavated, as required for other contract work, in accordance with Section 2.02.

**Method of Measurement:**

Work under this item will be measured for payment by the actual number of cubic yards of channel bottom material excavated and stockpiled in accordance with this specification. The Engineer will delineate the horizontal pay limits before the start of excavation. The vertical pay limits will be measured from the existing channel bottom to the bottom of the excavation required specifically for the stockpiling of existing channel bottom material.

Material excavated beyond the approved horizontal pay limits, or deeper than the depth of channel bottom material identified and approved by the Engineer will not be measured for payment under this item. Such additional excavation required to complete the contract work,

including roadway, structure, channel, and unsuitable material excavation, will be measured for payment separately under the applicable pay items. In no case will excavated material be measured for payment under more than one pay item.

The storage, re-excavation, placement and/or disposal of the channel bottom material will not be measured for payment.

**Basis of Payment:** Payment for this work will be made at the contract unit price per cubic yard for "Excavation and Reuse of Existing Channel Bottom Material". The price shall include all materials, equipment, tools and labor incidental to the preparation of the stockpile area, excavation of channel bottom, hauling of the material to the stockpile area, separating rock ledge and concrete debris, storing, protecting, including but not limited to sedimentation controls and material covers and final placement of the excavated channel bottom material. The price shall also include the removal and placement or disposal of surplus or unsuitable excavated material.

If bank run gravel is required and approved for use as supplemental material at the site, furnishing and placing the bank run gravel will be paid for as extra work, in accordance with Article 1.04.05.

Payment for all containment, diversion, or other separation of the Stream flow from the excavation of channel bottom material will be included in the item "Handling Water" or "Cofferdam and Dewatering".

Payment for clearing and grubbing will be included in the item "Clearing and Grubbing".

Excavation of material not identified by the Engineer for stockpiling and re-use in accordance with this specification will be paid in accordance with Section 2.02.

<u>Pay Item</u>	<u>Pay Unit</u>
Excavation and Reuse of Existing Channel Bottom Material	C.Y.